

Kapilow 1999-0096C

REMARKS

Claim 1 was rejected under 35 USC 102 as being anticipated by Bialik, US Patent 6,389,006. Applicant respectfully traverses.

The Examiner asserts that Bialik teaches all of the limitations of claim 1, and in support of this assertion (relative to the last clause of the claim) the Examiner points to col. 1, lines 41-45 and to col. 2, line 61 through col. 3, line 23. Applicant respectfully disagrees.

The col. 1 lines 41-45 passage states that

Most vocoders (systems which encode and decode voice signals) utilize already stored information regarding previous voice packets to interpolate what the lost packet might sound like

Of course, that is not a teaching of the nature of the "information regarding previous voice packets."

The col. 2, line 61 through col. 3, line 23 passage teaches a use of a voiced/unvoiced classifier with which the state of the last good frame is checked. What the classifier does is employ a correlation calculation and an energy calculation of the last 120 samples of the last good frame to determine whether the missing frame is voiced or unvoiced, and also to fine tune the pitch period (the information about which was sent by the encoder). The 120 samples are NOT used in the generation of the synthesized speech. A study of the G.723 standard, which purportedly the cited passage summarizes, reveals that only one pitch period is used in the synthesis (repeated whatever number of times it is needed).

In contradistinction, claim 1 specifies "using a portion of the previously formed speech signal" to synthesize "a portion of the speech signal corresponding to the unavailable packet." What is that used portion? The claim specifies that the used portion "is greater for speech of a fundamental frequency above a threshold than for speech of a fundamental frequency below the threshold." It is respectfully submitted, therefore, that claim 1 is not anticipated by G.732 and certainly not by the Bialik reference.

New claim 2 is submitted that is similar to claim 1, except that it more particularly specifies that the "used portion" is a portion of the developed speech signal that is repeated in order to realize the synthesized speech corresponding to the missing packet, and that repeated portion corresponds to a number of pitch periods and a threshold.

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IN THE CLAIMS:

1. (Original) A method for concealing the effect of missing speech information on generated speech, said speech information having been compressed and transmitted in packets to a receiver which does not receive one or more of such packets, the method comprising the steps of:

forming a speech signal based on received packets representing speech information;

in response to a determination that a packet is not available at the receiver to form the speech signal, synthesizing a portion of the speech signal corresponding to the unavailable packet using a portion of the previously formed speech signal, wherein the number of pitch periods of the previously formed portion used in such synthesis is greater for speech of a fundamental frequency above a threshold than for speech of a fundamental frequency below the threshold.

2. (New) A method for concealing the effect of missing speech information on generated speech, said speech information having been compressed and transmitted in packets to a receiver which does not receive one or more of such packets, the method comprising the steps of:

forming a speech signal based on received packets representing speech information; and

in response to a determination that a packet is not available at the receiver to form the speech signal, synthesizing a portion of the speech signal corresponding to the unavailable packet using a portion of the previously formed speech signal, which portion corresponds to a number of pitch periods of the previously formed portion that are repeated to form a synthesis of said one or more packets, which number is greater for speech of a fundamental frequency above a threshold than for speech of a fundamental frequency below the threshold.

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In light of the above amendments and remarks applicants respectfully submit that all of the Examiner's rejections have been overcome. Reconsideration and allowance of claims 1-2 are respectfully solicited.

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Respectfully,
David A. Kapilow

By _____

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Henry T. Brendzel
Reg. No. 26,844
Phone (973) 467-2025
Fax (973) 467-6589
email brendzel@comcast.net